



The Field Artillery (FA) tactical operations center (TOC) always has been a source of pride for most direct support (DS) battalions. In many instances, it has defined the commander's and his staff's effectiveness to plan and direct his units in the heat of battle.

In days past, the TOC served as the nerve cell for fighting an enemy with a distinct order of battle or fighting a fictitious counterfire battle against Kasnovian 2S-19 cannons and BM-21 rocket launchers. However in the past few years, the introduction of the forward operating base (FOB) has transformed many of our DS TOCs into base defense operations centers (BDOCs). In Operation Iraqi Freedom (OIF) III, many Artillerymen have the mission of establishing and maintaining

ing BDOCs to support combat operations in theater.

This article defines the role of the BDOC; provides a composite look at current OIF BDOCs and their tactics, techniques and procedures (TTPs); and examines how to transform an FA TOC into a BDOC.

BDOC Employment Options. The BDOCs in theater have been employed in several ways; however, for the sake of brevity, I will discuss only two methods of BDOC employment.

The first employment option is the FOB as a stand-alone operations center with the FOB's defense as its primary responsibility. The BDOC and its staff can focus on base operations and assume responsibility for manning and sustaining FOB towers, observations points (OPs), entry control points, perimeter patrols, individual search areas for local nationals and any surveillance equipment or early warning systems located on the FOB.

The stand-alone BDOC can be manned by a battalion-level TOC with only a few additions, including medical support Soldiers, radio telephone operators (RTOs) and specialty Soldiers to man any surveillance equipment or early warning system. The stand-alone BDOC also can include a small support cell to assume responsibility for supplying power to the FOB, managing sanitation issues, controlling local nationals who work on the FOB and managing daily FOB work details or tasking needs.

Option two involves meshing the BDOC with a TOC (battalion or brigade) that is responsible for not only the FOB, but the area of operations (AO) outside the FOB.

This option allows the TOC to assume the duties and responsibilities of the BDOC; however,

FA TOC as a Base Defense Operations Center in OIF

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SGT Michael Fiorella, B Battery, 4th Battalion, 320th Field Artillery, 101st Airborne Division, provides security in Baghdad on 9 January 2005.

Photo by SPC Teddy Wade, 55th Combat Camera

For Current Operations, provide—

- Threat analysis of the forward operating base (FOB) and surrounding areas.
- Predicted analysis, based on previous indirect fire attacks in which directed named areas of interest (NAIs) are incorporated or adjusted.
- Human intelligence (HUMINT) analysis of local tribes, insurgent leaders or groups.
- Daily situation reports (SITREPs) of attacks across the brigade sector.
- Proposed daily or weekly uniform posture, based on the current threat.
- Daily main supply route (MSR) reports on attacks or activities of interest for patrols.
- Analysis of the current radar search azimuth.
- Religious or cultural activity reports that can affect current operations.

For Future Operations, provide—

- Religious or cultural activity reports affecting future operations.
- Proposed NAIs to meet future threats.
- Radar deployment orders to meet future operations.
- Threat analysis for all future operations.

Figure 1: Priority of Work Established by the Base Defense Operations Center (BDOC) S2

as in most cases in theater, the BDOC loses a bit of focus although it gains the lethality of the TOC.

Advantages of the FA TOC as a BDOC. The FA BDOC brings lethality in its abilities to clear indirect fires for counterstrike operations; conduct patrols in the AO, thereby limiting the threat to the FOB; conduct raids on suspected sites; conduct surveillance outside the FOB; and establish and direct a quick-reaction force (QRF). The meshing of the BDOC and TOC becomes what we, as Artillerymen, have called a DS artillery TOC for some time; however, it now has responsibility for the FOB's defense.

The FA TOC provides the base commander the flexibility, manning and table of organization and equipment (TOE) needed to conduct BDOC operations. These capabilities are why more senior commanders are using their FA TOCs as BDOCs in theater.

The manning of the BDOC and an artillery TOC are similar; however, the TOE of an artillery TOC provides the FOB commander situational awareness using the digital and voice equipment in the battalion's inventory.

The advanced FA tactical data system (AFATDS) and its effects management tool (EMT) combination provide the commander a common operational picture (COP) of the FOB and specific areas surrounding the FOB. Recent software upgrades allow the use of video feeds and imagery to display on large screens in the BDOC using the EMT. In addition,

AFATDS can display all sensor acquisitions in the form of red vectors superimposed on maneuver boundaries, allowing the staff to conduct target analysis on all radar acquisitions.

A BDOC Model. Although Artillerymen operate most of the BDOCs in theater, no standard has been established due to the differences in FOBs and their areas of responsibilities (AORs). However, a composite snapshot can illustrate the BDOC's basic staff tenets and responsibilities.

Intel Section. The BDOC intelligence section or S2 must perform multiple tasks that fall between current and future operations. The ability to outguess the enemy is as important as the daily intelligence summaries the S2 must brief to the BDOC staff and (or) to individual Soldiers performing entry control point duty. Therefore, the BDOC S2 must establish a priority of work for the S2

section (see Figure 1).

Although most of the tasks listed in Figure 1 are not specific to the FA TOC, they are part of a BDOC S2's function or daily scope. Radar deployments and the use of named areas of interest (NAIs) affect the BDOC's ability to perform counterstrike operations.

BDOC S3 Section. In most cases, the S3 is divided into three tiers of responsibilities. First is the fires and effects cell (FEC) that is subdivided into lethal (counterstrike) and nonlethal effects (civil affairs or S5) sections. Second is current BDOC operations that can include operational activities, such as daily patrols, perimeter guards, QRF, tower guards, daily taskings for the FOB and manning the BDOC. The last is future BDOC operations that, essentially, is the planning cell for all operation and can include members from all three S3 tiers and the S2 section.

The FEC is comprised of a mixture of personnel, each of whom is a subject matter expert (SME) for his respective systems. See Figure 2 for a list of the SMEs in the BDOC's FEC by military occupational specialties (MOS).

Although the current modified TOE (MTOE) can support normal DS TOC operations, it may need changes or additions to support the BDOC and 24-hour operations. Essentially, a few additional personnel can be shifted into the FEC from other sections. For example, the battalion fire direction center (FDC) can assume the primary role of the FEC, members of the radar sections can be assigned to the FEC and FA surveyors (82Cs) can help in the BDOC as radio operators or as planners in the future operations cell.

BDOC AO in OIF. Using current doctrinal terms for high-intensity operations, the OIF BDOC AO is defined as deep, close and rear operations. Depending on the size of the FOB, the base commander must establish command and control of

- **13D**—FA Tactical Data Systems Specialist to man counterstrike operations using the advanced FA tactical data system (AFATDS) and its effects management tool (EMT).
- **13F**—Fire Support Specialist to perform targeting functions using AFATDS and (or) the automated deep operations coordination system (ADOCS).
- **13R**—FA Firefinder Radar Operator to man sensors and help with sensor deployments.
- **96B**—Intelligence Analyst to provide analysis for the BDOC.
- **31L**—Cable Systems Installer-Maintainer to man, maintain and sustain digital networks and voice communications.

Figure 2: Subject Matter Experts (SMEs) in the BDOC's Fires and Effects Cell (FEC) by Military Occupational Specialties (MOS)

the BDOC down to its lowest possible level, which, in most cases, is the DS FA TOC. Deep, close and rear operations are the focal points for the BDOC.

Deep Operations. These operations involve the area surrounding the FOB that the BDOC commands and controls. The following are examples of deep operations.

- Coordinate with adjacent units for patrol schedules, NAIs and suspected enemy positions. This coordination can impact the enemy's ability to attack with indirect fire.

- Establish human intelligence (HUMINT). This develops targets in the battlespace.

- Coordinate and use aerial surveil-

lances. These establish the BDOC's ability to observe in its AO.

- Develop mounted and dismounted patrol schedules with clearly defined tasks and purposes.

- Develop perimeter patrolling schedules.

- Establish tower observation guidelines for target recognition.

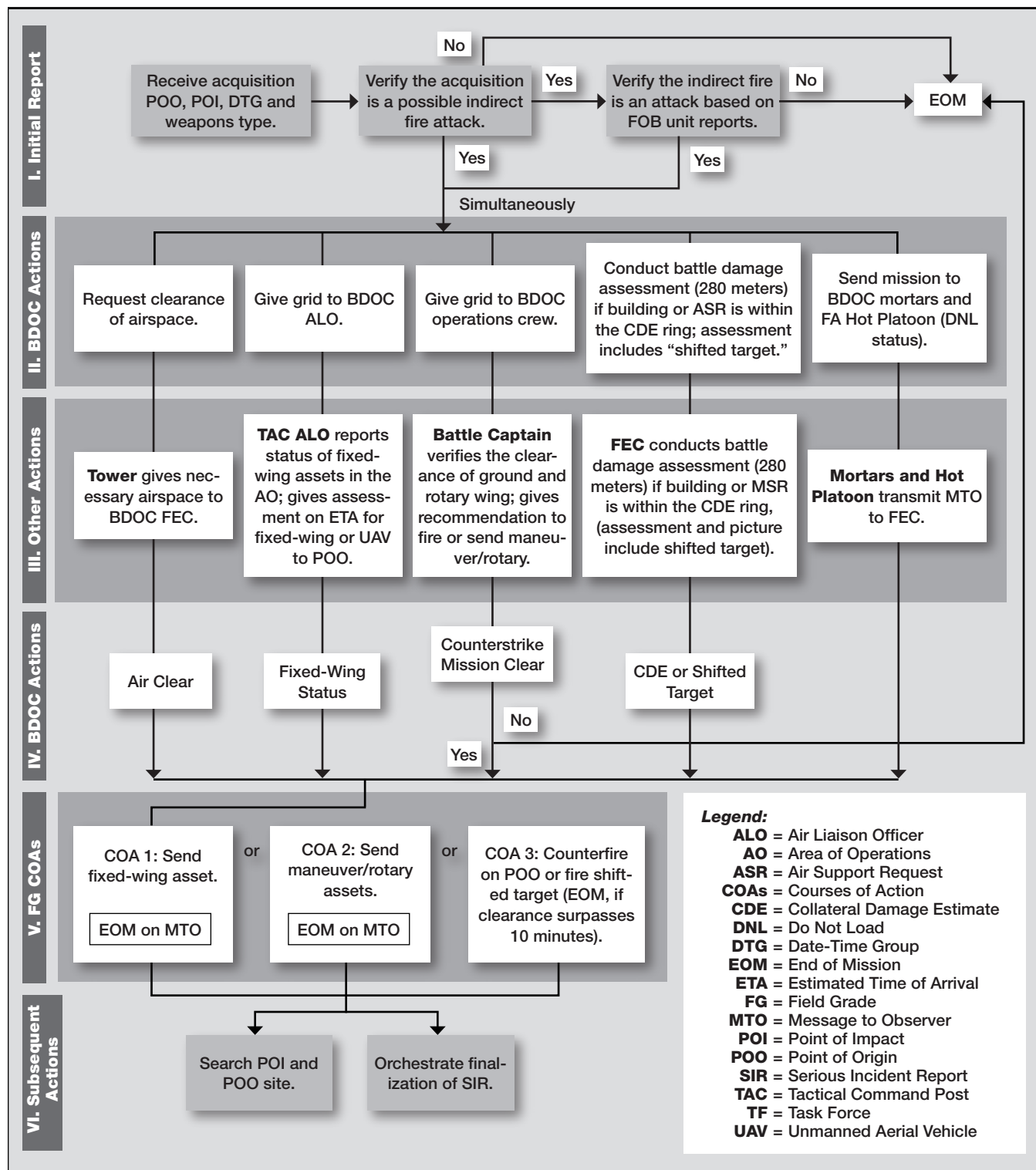


Figure 3: Proposed Counterstrike Drill used by several BDOC FECs in Operation Iraqi Freedom (OIF) III

- Establish counterstrike options for indirect, QRF and fixed- or rotary-wing assets. The latter is an example of how an FA TOC has the flexibility to conduct base defense while simultaneously providing counterstrike operations to deal with the indirect fire threat to the exterior of the base, which is the most likely area the enemy will attack.

Recent trends show that the most likely means for enemy attack is indirect fire (rockets and mortars). In most areas in theater, the DSTOC provides and controls a Hot Platoon that can be linked directly to sensors for counterstrike purposes.

Close Operations. For most FOBs close operations are considered an extension of deep operations; however, it is in close operations that the BDOC has its primary focus: the perimeter.

In most cases, the BDOC's perimeter is defined by the threat from direct fire systems, which is about 500 meters. Therefore, the BDOC must establish perimeter defenses as follows.

- Perimeter patrols, both mounted and dismounted, monitor the exterior of the FOB wall or structure.

- Entry control points monitor and search all vehicles and personnel entering the FOB.

- Towers defend the FOB perimeter as two-man fighting positions.

The FA TOC provides the FOB commander the ability to command and control the close fight as well as gives him additional assets. The following are examples of how Artillerymen are fighting the current fight in OIF.

- FA observers (13F) equipped with digital and radio equipment patrol FOB perimeters, providing quick response capabilities and instant situational awareness.

- Paladin howitzers are placed at FOB entry control points as the first line-of-defense against enemy attacks.

- 13 series Soldiers man the towers with voice and digital equipment capable of providing information to the TOC.

"Rear" Operations. These are operations involving the interior of the FOB. Although they don't involve force protection directly, these operations do help the BDOC constantly assess the FOB's vulnerability to attack or infiltration. In addition they help the BDOC respond in support of incidents, such as mass casualties or catastrophic power failures.

BDOC TTPs. The ability to address the indirect fire threat with counterstrike operations is, perhaps, where many of our artillery-run BDOCs become one

| FEC Chief Actions | Battle Captain Actions |
|---|--|
| <ul style="list-style-type: none"> • Receives a Q-36 or Q-37 Firefinder radar Acquisition. • Confirms the grid, plots using imagery and checks for common sense. • Verifies or confirms the impact of the rounds. • Sends the mission to the Hot Platoon to compute a technical solution. • Clears the airspace through the tower. • Conducts CDE using imagery. • Clears the ground target with maneuver units. • Diverts or employs rotary-wing aviation, based on the gun-target line and response time. • Reviews the counterfire checklist with the Battle Captain and recommends the execution of fires or not. • Issues instructions to fire or EOM. | <ul style="list-style-type: none"> • Reviews the counterfire checklist to ensure all steps have been accomplished. - Grid cleared by the task force on the ground. - Airspace cleared with the tower. - Rotary-wing cleared. • Conducts independent CDE on— - Gun-target line (considerations for rocket-assisted projectiles, or RAP). - ASR/MSR. - Structures. • Receives recommendation to fire from the FEC chief. • Concurs/non-concurs with the recommendation. • Issues permission to fire or EOM, as appropriate. |

Figure 4: Proposed Counterstrike Crew Checklist used by several BDOC FECs in OIF III

in TTPs. See Figure 3 for a proposed counterstrike crew drill and Figure 4 for a counterstrike crew checklist used by several FEC BDOCs.

The migration of the artillery TOC as the BDOC also has established the use of digital communications as well as voice. This migration has allowed for additional TTPs for situational awareness inside the BDOC using digital equipment, such as the blue force tracker displayed on screens. This has allowed operations cells to track patrols, help clear fires and divert assets to areas of interest or suspected enemy positions.

Additional digital TTPs provide plain text capabilities for digital messages between the operations cell and the tower or guard point and enable fire mission processing in the event of an attack.

Another successful reactive and predictive tool incorporated into BDOC operations is the crater analysis team. It is comprised of Artillerymen (13Fs or 13Ds) who conduct crater analysis of suspected points of impact (POIs) and, in some cases, can determine points of origin (POOs). The ability to predict the type of attack (type and size of ammunition) based on the crater has proven invaluable for the BDOC S2's reactive threat analysis, construction of NAIs and determination of radar search azimuth. Crater analysis also allows the BDOC S3 to determine proactive protection measures, such as patrol

schedules or the use of unmanned aerial vehicles (UAVs) on suspected POOs.

Changing our artillery TOC into a BDOC has been done easily and flawlessly in theater during OIF III. Tailoring the FA TOC to fit the mission is part of our artillery history and, as usual, we have stepped up to the task today. The BDOC does not limit or change our FA TOC mission—in fact, it enhances our ability to protect a FOB and provide counterstrike capabilities.

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